UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/541,771	04/03/2000	John R. McVey	10991816-1	4745

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EXAMINER
LAMB, TWYLER MARIE

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _07 October 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-21_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _16-21_ is/are allowed.

6)☒ Claim(s) _1-12_ is/are rejected.

7)☒ Claim(s) _13-15_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Notice to Applicant (s)

1.   This action is responsive to the following communications: amendment A filed on

10/7/03.

2.   This application has been reconsidered. Claims 1-21 are pending.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-6 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated

by Farmwald et al. (Farmwald) (US 6,032,214).

With regard to claims 1 and 10, Farmwald discloses a method for performing a

transaction on a bus, comprising: receiving a signal requesting the transaction (col 6,

line 52 – col 7, line 5); generating a first value using the signal (col 9, lines 21-36);

storing the first value in a storage device (col 9, lines 21-36), with the first value

including a plurality of bits indicating a beginning of usage of the bus (col 9, lines 21-36)

and an ending of the usage of the bus for the transaction in terms of clock cycles (col 9,

lines 21-36; col 12, line 56- col 13, line 3); and executing the transaction according to

the first value (col 9, lines 21-36).

With regard to claims 2 and 11, Farmwald also discloses storing the first value in

the storage device includes storing the plurality of bits in storage elements included in

the storage device, with those of the plurality of bits in a first state indicating the clock cycles during which the usage of the bus occurs for the transaction (col 9, lines 21-36).

With regard to claim 3, Farmwald also discloses each of the storage elements stores one of the plurality of bits (col 9, lines 21-36).

With regard to claim 4, Farmwald also discloses receiving the signal includes receiving a second value indicating a number of the clock cycles during which the usage of the bus occurs for the transaction (col 12, line 56- col 13, line 3); generating the first value includes generating the plurality of bits using the second value with positions within the first value of those of the plurality of bits in the first state indicating the clock cycles during which the usage of the bus occurs for the transaction (col 12, line 56- col 13, line 3); and each of the positions within the first value corresponds to one of the storage elements (col 9, lines 21-36).

With regard to claim 5, Farmwald also discloses changing the first value in the storage device after storing in the first value and after an occurrence of at least one of the clock cycles by shifting ones of the plurality of bits between the storage elements (col 15, lines 6-23).

With regard to claim 6, Farmwald also discloses executing the transaction includes monitoring a first one of the positions to determine a beginning of the transaction (col 9, lines 21-36).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 7-9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Farmwald et al. (Farmwald) (US 6,032,214) in view of Sarangdhar et al.

(Sarangdhar) (US 5,581,782).

With regard to claims 7 and 12, Farmwald differs from claim 7 in that he does not

teach those of the plurality of bits in a second state indicate the clock cycles during

which the bus exists in an idle condition; and generating the first value includes

generating the plurality of bits in the second state so that the bus exists in the idle

condition for at least one of the clock cycles between the usage of the bus for the

transaction and the usage of the bus for a previous transaction.

Sarangdhar discloses a system that includes those of the plurality of bits in a

second state indicate the clock cycles during which the bus exists in an idle condition

(col 2, line 63 – col 3, line 17); and generating the first value includes generating the

plurality of bits in the second state so that the bus exists in the idle condition for at least

one of the clock cycles between the usage of the bus for the transaction and the usage

of the bus for a previous transaction (col 2, line 63 – col 3, line 17).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have modified Farmwald to include those of the plurality of bits in a

second state indicate the clock cycles during which the bus exists in an idle condition;

and generating the first value includes generating the plurality of bits in the second state

so that the bus exists in the idle condition for at least one of the clock cycles between

the usage of the bus for the transaction and the usage of the bus for a previous

transaction as taught by Sarangdhar. It would have been obvious to one of ordinary

skill in the art at the time of the invention to have modified Farmwald by the teaching of

Sarangdhar to provide high performance symmetric arbitration protocol that includes

support for priority agents and distributed arbitration by indicating which agent is busy or

idle as taught by Sarangdhar in col 2, lines 37-46.

With regard to claim 8, Farmwald as modified also discloses the bus including a

data bus (col 4, lines 13-15); the transaction includes an access to a memory device

including a control phase and a data phase (col 7, lines 1-4); executing the transaction

includes beginning the control phase when the first one of the positions enters the

second state (col 7, lines 1-47); and executing the transaction includes beginning the

data phase when a second one of the positions enters the first state (col 7, lines 1-47).

With regard to claim 9, Farmwald as modified also discloses the bus including an

address bus (col 5, lines 16-28); the transaction includes an access to a memory device

including a control phase (col 5, lines 16-28); executing the transaction includes

beginning the control phase when the first one of the positions enters the first state (col

5, lines 16-28).

Allowable Subject Matter

5.   Claims 13-15 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

6.   Claims 16-21 are allowed.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Twyler Lamb whose telephone number is 703 - 308-

8823. The examiner can normally be reached on M-TH (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward L Coles can be reached on 703-308-4712. The fax phone numbers

for the organization where this application or proceeding is assigned are 703-746-6036

for regular communications and 703-872-9314 for After Final communications.

Any response to this action should be mailed to:

        Commissioner of Patents and Trademarks
        Washington, DC 20231
or faxed to:
        (703) 872-9314
        (for informal or draft communications, such as proposed amendments to be
        discussed at an interview; please label such communications "PROPOSED" or
            "DRAFT")
or hand-carried to:
        Crystal Park Two
        2121 Crystal Drive
        Arlington. VA.
        Sixth Floor (Receptionist)

Twyler Lamb

December 29, 2003